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The following gentlemen were elected correspondents: L. E. Latemer, M. D., of New York; A. A. Breneman, of Lancaster; H. Evan Rijgersma, of St. Martin's, W. I.; Prof. Oliver W. Holmes, of Boston.

On favorable report of the Committees, the following papers were ordered to be published:

Notice of some American LEECHES.

BY JOSEPH LEIDY, M. D.

Having been invited by Mr. R. H. Lamborn, Secretary and Treasurer of the Mississippi and Lake Superior Railroad Company, to join an excursion to Minnesota and Lake Superior, the last summer, during the trip I had the opportunity of making many interesting observations in natural history. The many lakes of Minnesota are rich in mollusca, annelides, &c. Among the annelides, besides an abundance of the ordinary American medicinal leech *Hirudo decora*, I noticed one which struck me from its general resemblance to a variety of the European medicinal leech, *H. medicinalis*. One of the gentlemen in company with us, Mr. Clark, allowed me to try upon him its disposition to bite, but I did not succeed in getting the animal to do so. Upon examination of the leech, I find it belongs to a different genus from *Hirudo*, apparently to the genus *Aulastomum*. Its characters are as follows:

AULASTOMUM LACUSTRIS, n. s.

Body cylindroid, compressed, narrowing anteriorly, obtuse at the sides (in movement more cylindroid, or less flattened, and quite obtuse laterally compared with *Hirudo decora* in the same condition). Color throughout olive green, (with more of a yellowish hue than in the dorsal green of *H. decora*), closely maculated everywhere with confluent spots of a darker hue of the same color. Ninety-two annuli, exclusive of the lips, of uniform width, smooth. Upper lip half ovate, obtuse; lower lip narrow. Eyes ten; eight in the upper lip; the last pair separated by an annulus from the others. Mouth obliquely terminal, large. Acetabulum subbasilar, ventral, sessile, circular. Anus dorsal, above the acetabulum. Male aperture in the 24th annulus (but apparently between the 23d and 24th). Female aperture in the 29th annulus (apparently between 28th and 29th). Oesophagus capacious, extending to about the 22d annulus, with 12 folds. Jaws three, small, when at rest included in pouches formed by an eversion of the mucus membrane. Teeth 12 in number to each jaw, bilobed at base. Length 4 to 5 inches, breadth 5 lines posteriorly; acetabulum 2 lines in diameter.

Var. An individual of lighter olive green than the former had black maculae replacing the dark green ones, which were also more distinct and fewer.

Specimens described from Twin Lake, Minnesota. In the summer of 1865 I saw several leeches at Saut St. Marie, in Lake Superior, which so far as I can remember were of the same species. At the edge of the shore I also saw some cocoons which I supposed to belong to the same animal. They were ochreous yellow, oval, about 4 or 5 lines in diameter; the surface impressed with concave pentagonal and hexagonal pits. From the angles of the margins of the latter projected branching processes curling at the ends.

Notwithstanding our familiarity with the American medicinal leech, its long and frequent employment in the medical profession, and the vast numbers which have been brought to notice, it has been so imperfectly described that, in the excellent *Systema Helminthum* of my late esteemed friend Dr. Diesing, of Vienna, it has been placed with the "Bdellidea species genere penitus dubiæ." I therefore take the present opportunity of indicating its characters more fully. It agrees most nearly with the diagnosis of the genus *Hirudo*, of 1868.]

which the *H. medicinalis* of Europe is the type, but nevertheless possesses peculiarities perhaps rather more than specific. Its characters, generic and specific, are as follows:

HIRUDO DECORA.

Say: Long's Exposit. vol. ii, 1842, Append. 268. Moquin-Tandon: Monog. Hirud. 1846, 344. Diesing: Syst. Helm. i, 1850, 474. Wood and Bache: United States Dispensatory.

Body elongated, compressed cylindroid, narrowing anteriorly, laterally subacute; in motion convex above, flat below, with the margins compressed, thin, acute and somewhat wavy; composed of from 90 to 94 annuli, which are uniform and smooth. Head continuous with the body. Mouth obliquely terminal, bilabiate; the upper lip prominent, semioval, obtuse, or from contraction of the tip emarginate; lower lip forming the inferior portion of the first annulus; the lips together acting as an acetabulum ovoid or obcordate in form. Eyes 10, arranged in horse shoe form, the anterior 8 above the upper lip, the posterior pair separated from the others by the first annulus. Acetabulum subbasilar, ventral, sessile, circular. Anus dorsal, above the acetabulum. Male aperture perforating the 25th annulus, with the lips more or less prominent. Female aperture between the 29th and 30th annuli. A group of four papillæ situated back of the latter on the 34th to the 36th annuli inclusive. Jaws three, semicircular, laterally compressed, furnished with 55 teeth, which have an acute curved summit and an expanded bilobed base. Oesophagus short and narrow compared with that of *Aulastomum*, furnished with 6 longitudinal folds, of which three coarse ones descend from the jaws and three narrow ones are intermediate.

Color. Dorsal surface olive green, with a median irregular band and a lateral line of darker hue of the same kind; a median row of reddish brown dots, and a lateral row of black dots. Ventral surface reddish brown, extending slightly above the lateral margin, devoid of spots, or more or less maculated with black. Acetabulum colored like the back above and the belly below.

In the genus *Hirudo*, as characterized by Diesing, (Syst. Helm. i, 465), and to which he assigns 9 recognized species, the jaws are furnished with from 60 to 70 teeth, and the male aperture is situated between the 24th and 25th segments. Moquin-Tandon (Monog. Hirud. 1846, 326) likewise assigns the latter as the position of the male aperture in the genus *Hirudo*.

The position of the generative apertures in *H. decora* often appear more or less discolored, or of a dull purplish hue, and the same is the case with the group of papillæ back of them. The latter do not exist in the medicinal leech of Europe. They are quite conspicuous in ours. I have suspected that they were provided for the adherence of individuals in sexual intercourse, and this view is confirmed by Mr. S. J. Moore, the well known professional leecher and bleeder of this city. Mr. Moore informs me that in copulo two individuals adhere in the position of the papillæ and make two turns of a spiral upon each other.

The red and black spots of the back contain from 20 to 22 in each row.

Length up to 7 inches, by 8 lines in breadth posteriorly; and the acetabulum 3 lines in diameter.

Notice of some remains of Extinct PACHYDERMS.

BY JOSEPH LEIDY, M. D.

DICOTYLES NASUTUS.

Extinct Peccary. Leidy: Pr. A. N. S. 1860, 416.

An extinct species of Peccary, obviously different from any one heretofore noticed, is indicated by a specimen submitted to my examination by the late Dr. David D. Owen. It was found in digging a well in Gibson Co., Indiana, at a depth of between 30 and 40 feet.

[Oct.